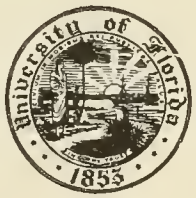
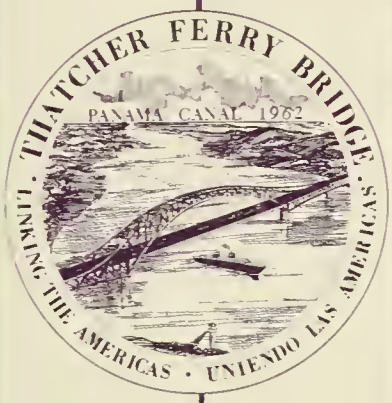


LINKING

PANAMA CANAL REVIEW



THE AMERICAS

ROBERT J. FLEMING, JR., Governor-President
W. P. LEBER, Lieutenant Governor
WILL AREY
Panama Canal Information Officer

PANAMA CANAL REVIEW

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ROBERT D. KERR and JULIO E. BRICENO
Editorial Assistants
EUNICE RICHARD, TOBI BITTEL, and TOMAS A. CUPAS

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The Land Reunited

IT IS DOUBTFUL if any bridge in the world surpasses the Thatcher Ferry Bridge as a uniting element between: Two parts of a country, two continents, two peoples, and, soon, the two parts of the world's greatest highway system.

Nothing, perhaps, could better express the historic setting for the October 12 dedication and opening of the huge new bridge linking the Americas.

The above words, from Elmer B. Stevens, bridge project resident engineer, stress the true meaning of this new major world traffic link.

The bridge also is viewed by Mr. Stevens as "a fitting and proper sequel to the slogan coined during Canal construction days, 'The Land Divided, the World United.' We can now say, 'The Land Reunited' with the secure knowledge that this fact further enhances world unity, and at a time when such unity is sorely needed."

News and picture highlights of bridge history may be found on the following pages, along with some sidelights provided by Mr. Stevens in an article on page 7.

Techniques, technology, and equipment have improved vastly since the days of Canal construction. But the key roles have ever been those of the men and women of the Isthmus. Magnitude of the jobs faced, and conquered, is evident in every picture and every account of the bridge project.

The date of the ceremonies is a memorable one for more than one reason. It was on an October 12 that Christopher Columbus first saw American soil.

Index

This issue of THE REVIEW will reach a far broader audience than the average edition. Extra copies of THE REVIEW and of THE REVIEW En Español have been ordered to meet expected demands. Among these is a request from the Foreign Office of the Republic of Panama for extra copies for distribution to embassies, consulates, and schools.

ABOUT OUR FRONT COVER—The commemorative medallion for the Thatcher Ferry Bridge dedication October 12 is flanked by an aerial view of the bridge itself showing dramatically the linking of the banks. The reverse side of the medallion portrays a map of this part of the hemisphere, with the Isthmus at its center, and dedication date. Aluminum pocket pieces 1½ inches in diameter, miniatures of the medallion, have been ordered as souvenirs, along with decals reproducing the face of the medallion.

The Bridge . . . by Night . . .

Dedicated – To Service

THE ONLY surviving member of the Isthmian Canal Commission will be present October 12 at the ceremonies to be held to dedicate the impressive new bridge which bears his name.

He is Maurice H. Thatcher, a man who celebrated his 92d birthday in August and whose enthusiasm and vitality won for him the unofficial title of the "First Governor of the Canal Zone." He was, in fact, the youngest member of a group of extraordinary men which included Col. W. L. Sibert, Joseph Bucklin Bishop, Adm. H. H. Rousseau, Col. Harry F. Hodges, Col. David D. Gaillard, Col. William C. Gorgas, and Col. George W. Goethals.

Mr. Thatcher served as Chief of the Department of Civil Administration which controlled Canal Zone civil affairs and included the representation of the Isthmian Canal Commission in its relations with the Republic of Panama and the foreign diplomatic missions. He held this position from May 13, 1910, until August 8, 1913.

His name has long been associated with matters relating to the Isthmus of Panama. On two occasions he has been president of the Gorgas Institute and was one of the founders of the "Panama Society" of Washington. In addition, he is closely connected with the Isthmian Historical Society, which was organized at his suggestion.

For five consecutive terms, from 1922 until 1933, Mr. Thatcher was elected to the U.S. House of Representatives from the district of Louisville, Ky. It was during these years that he introduced legislation which created the ferry service across the Canal later known as Thatcher Ferry, made possible construction of a road connecting the west terminal of the ferry with the town of Arraijan, and established the Gorgas Memorial Institute of Tropical and Preventive Medicine.

Maurice H. Thatcher.

Tireless in his efforts on behalf of the

(See p. 19)

. . . And by Day

Free, Permanent Transit

THE $20 MILLION high level bridge across the Panama Canal at Balboa, a U.S. Treaty commitment, assures free, permanent transit of vehicles and pedestrians from one bank of the Canal to the other.

Such a bridge was one of the principal stipulations of the Remon-Eisenhower Treaty and Memorandum of Understanding signed between Panama and the United States in 1955.

The U.S. Congress, in 1956, approved an appropriation of $20 million for the design and construction of the permanent bridge across the Canal.

This bridge replaces the Thatcher Ferry service, which had been used the past 30 years as a means of communication between the east and west banks of the Canal.

Construction started on December 23, 1958, with an official ceremony in which former President of Panama Ernesto de la Guardia, Jr., and former Canal Zone Governor W. E. Potter participated. Other Panamanian dignitaries present included the Minister of Public Works, Roberto López Fábrega. Silver shovels were used to turn the first shovelfuls of earth at the base of Farfan Hill.

It was not until September 1959, that actual work began. The midget dredge *Mandinga* began excavation of a channel parallel to the location of the bridge piers, to facilitate access to the pier sites.

The bridge was designed by Sverdrup, Parcel & Associates of St. Louis, Mo. Governor Potter named a construction advisory board whose members were Ralph A. Tudor, structural engineer; Dr. R. P. Davis, structural engineer; F. C. Turner, chief engineer in the office of public roads; E. B. Burwell, Jr., geologist; and Aymar Embury II, architect, all experts in their special fields.

The contract for construction of the substructure was awarded in 1959 to Fruin-Colnon International, S. A., and LeBoeuf and Dougherty, Inc., a joint venture from St. Louis, Mo. Some difficulties were encountered by the substructure contractor in satisfactorily completing the two largest cofferdams erected at the water pier sites.

In order to excavate to firm rock and pour concrete footings "in the dry" for the water piers, cofferdams of the open, internally-braced single-wall type were used. All piers and abutments were completed in November 1961.

Foundations of the bridge consist of reinforced concrete abutments, with the water piers resting on firm rock and the land piers on clusters of cylindrical reinforced concrete caissons which extend down to firm rock.

The largest contract in connection with the bridge, for the superstructure, was awarded in February 1960, to John F. Beasley Construction Co. of Dallas, Tex., on a bid of $9,199,000. The contract included furnishing structural steel manufactured in West Germany as a joint venture by four firms.

The steel started to arrive on the Isthmus in June and July of 1961. In August, a crew of 75 specially trained steel construction men arrived from the United States. These men, skilled in the work of erecting bridge spans, did the actual work of joining 15,000 tons of steel with bolted connections.

Fabrication of structural steel for the bridge was completed in Germany in January 1962, and by the end of that month all fabricated steel, with the exception of some minor parts, had been shipped to the Isthmus.

The bridge is 5,425 feet long, with the longest single span, directly over the Canal channel, measuring 1,128 feet. The highest portion of the bridge is 384 feet above the average level of the Canal. The lowest portion of the structure is 201 feet above the Canal at high normal tide.

The bridge has four traffic lanes and a pedestrian walk, with three traffic lanes and a pedestrian walk on the approaches. The roadway is of 7-inch reinforced concrete, which rests on steel beam and girder framework.

The lighting system provides 1,600,000 "lumens" of light from 80 mercury vapor lights, 16 aerial and sea navigation lights, and 3 flashing hazard lights, one at each end of the bridge, another in the center at the highest point of the bridge.

Dream of Years Now Reality

A PERMANENT BRIDGE or tunnel across the Canal appears to have been seriously considered as far back as 1909, when sites at Empire, Culebra, Gold Hill, and Paraiso were considered.

Further talk of a permanent bridge was postponed by actual construction of a temporary suspension bridge at Empire with a 12-foot roadway only a few feet above the 95-foot level.

Here is the sequence of historical events which led to construction of the new Thatcher Ferry Bridge linking the Americas:

1913—Serious consideration again was given to a permanent bridge or tunnel and several comparative estimates were made. Greater concern with early opening of the Canal without risk of further delay appears to have caused sidetracking of the project.

1929—The bridge-tunnel project broke into print again in Panama Canal files and newspapers, but quite likely the financial crisis in that year stopped any further consideration at that time.

1937—Project revived by president of Panama Automobile Club, Leopoldo Arosemena. Pressure and interest by various agencies on both sides of the line continued from this date to the immediate pre-war period by which time a tunnel was being seriously considered for military reasons.

1941—In this year, negotiations with an architectural engineering firm were actually under way for design of a tunnel. They were suspended by official directive early in 1942 because of the war.

1942—Miraflores swing bridge was opened in June but it was never intended as a substitute for the permanent high-level fixed bridge or tunnel, having been built primarily for third locks construction. However, once built, it undoubtedly has had a delaying effect on the main project. The traffic it now carries could not have been handled by the existing ferry.

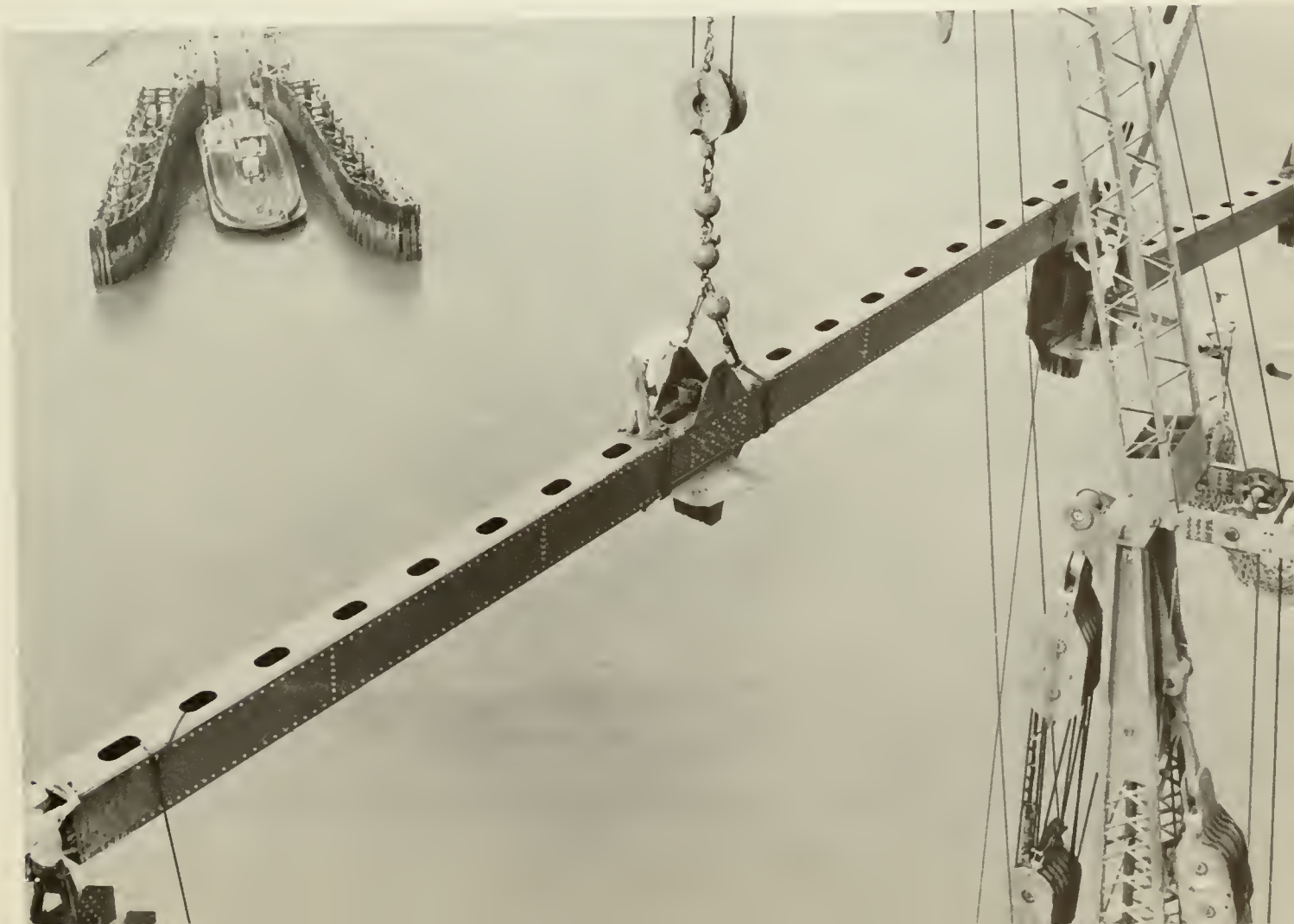
The General Relations Agreement between the United States and Panama effected by an exchange of notes signed at Washington May 18, 1942, contained a number of commitments on the part of the United States.

The agreement was related to, and was, in effect, the counterpart of an agreement covering the lease of defense sites signed at Panama on the same date.

Point 4 of the 1942 Agreement, concerning construction of a tunnel or bridge over the Canal at Balboa, C.Z., commits the United States to build such a bridge or tunnel when the World War II emergency has ended.

1942-1954—The prospects of a tunnel, and occasionally a bridge, came up from time to time during this period, originating both from political sources

Historic moment: Bridge sections joined May 16, 1962.



and from private interests soliciting the opportunity to perform the design and construction.

1954—The Governor concluded, after review of the many studies and arguments, that a bridge was superior to a tunnel. The Chiefs of Staff of the U.S. Army, U.S. Air Force, and the Navy all concurred.

1955—New estimates were made of a high-level bridge at Balboa, of a type and span lengths differing from previous estimates. A bill was presented to Congress authorizing the construction of a bridge, at an estimated cost of $20 million.

1955—Construction of a bridge across the Canal at Balboa again became a commitment of the United States under the Eisenhower-Remón treaty of friendship between the United States and Panama.

1956—On July 23, of this year, President Eisenhower, on a visit to Panama, signed a bill authorizing and directing the Panama Canal to construct, maintain, and operate a bridge over the Canal, at Balboa. A supplemental appropriation providing $750,000 with which to start design and engineering on the bridge was signed by the President on August 28, 1957.

1957—On November 5, after a thorough canvass of all eligible interested firms, a contract was signed with the firm of Sverdrup, Parcel & Associates of St. Louis, Mo. to make a preliminary engineering study, and to present estimates and schematic designs of several types of bridges.

The following were selected in December to constitute a technical Board of Consultants for the bridge project:

Roland Parker Davis, M., ASCE, Dean Emeritus, West Virginia University, Consulting Bridge Engineer.

Aymar Embury II, Consulting Architect, of New York.

Edward B. Burwell, Jr., Consulting Geologist, and Chief Geologist, Office of Chief of Engineers.

Ralph A. Tudor, M., ASCE, one-time Chief Engineer of San Francisco Bay Toll Crossings, Under Secretary, Department of Interior, Washington, D.C.

E. L. Erickson, Chief, Bridge Design Division, Bureau of Public Roads, Washington, D.C.

1958—Representatives of Sverdrup, Parcel & Associates met in Balboa with the Board of Consultants and with officials of the Panama Canal April 10, and presented the results of their preliminary studies. Design recommended by Sverdrup, Parcel & Associates was approved by the Board, and the approximate alignment selected.

A contract was signed with Sverdrup, Parcel & Associates in April to furnish complete design for the type of bridge selected.

1958—Construction work on the bridge was formally initiated in December in a ceremony attended by Panama President Ernesto de la Guardia, Jr., and Canal Zone Governor W. E. Potter.

1959—First actual work on construction of the substructure took place in September.

Contract for the substructure was awarded to Fruin-Colnon International. S. A., and LeBoeuf and Dougherty, a joint venture, from St. Louis, Mo.

1960—Contract for the superstructure was awarded to John F. Beasley Construction Co., of Dallas, Tex., in February.

1961—During June and July steel began arriving from West Germany. By November all piers and abutments were completed.

On October 25 the last yard of concrete was poured on the substructure, which was completed November 4.

1962—A 70-foot steel beam was raised into place May 16 by a floating crane, joining the two sections of the bridge while tugs tooted and Canal and bridge workmen cheered. Gov. Robert J. Fleming, Jr., accompanied by other officials and newsmen, watched from the tug *San Pablo*.

SAYS EX-PRESIDENT ALFARO:

"...Well-Deserved Tribute..."

Dr. Ricardo J. Alfaro, former President of Panama (1931-1932), now Justice of the International Court of Justice in The Hague, Holland, wrote the following letter to the Honorable Maurice H. Thatcher commenting on an article which appeared in a leading United States newspaper regarding the Thatcher Ferry Bridge.

12315 Stoney Creek Road,
Rockville, Md., December 6, 1961.

My dear Governor Thatcher:

Please find enclosed the clipping you kindly handed me day before yesterday, which I am returning to you with my thanks. I have read it with utmost interest and pleasure and I am very happy that your signal services to your country and to the cause of Pan-Americanism are duly recognized by a paper of such great prestige as *The Christian Science Monitor.*

The parallel between yourself and your famous fellow Kentuckian Henry Clay is both just and accurate. If Clay is entitled to be remembered as the pioneer of Pan-Americanism in the United States, you have no lesser title to the recognition, the gratitude and the respect of all the peoples of our continent and particularly of the people of Panama for your magnificent work on behalf of good understanding and real friendship between the Americans of the North and the Americans of the South.

Giving your illustrious name to the colossal bridge that will re-establish continuity in the land divided by the Panama Canal is an act of justice and a well-deserved tribute. The Thatcher Bridge will be the culmination of a noble thought which had its first expression in the Thatcher Ferry. I congratulate you upon the honor you have received and my highest praise goes to the Congress and to President Kennedy for their worthy action in honoring you.

Amelia joins me in congratulating you and in expressing best wishes for your prompt and complete recovery, and with renewed assurances of my admiration and esteem, I remain

Very sincerely yours,

R. J. ALFARO.

The Honorable
MAURICE H. THATCHER,
The Somerset, Washington, D.C.

And Some Bridge Project Sidelights . . .

THE LAND REUNITED

By Elmer B. Stevens
Bridge Project Resident Engineer

ON THE NIGHT of September 8, 1962, Thatcher Ferry Bridge blossomed out with all its roadway lighting plus the aircraft warning lights atop the high arch. At this stage it could be compared with a fine lady primping for a party, complete except for the final touches of "putting on her face."

All the graceful curves are now outlined with the proper degree of daring and discretion, essential fastenings secured, and the "tout ensemble" neatly poised on high heels. Just as our lady is now ready for the mirror of the public eye, which reflects sidelights and highlights that she may or may not suspect, our bridge is nearly ready for the same critical scrutiny.

The hard work now lies behind and the lighter moments of the party lie just ahead.

Just as our lady awaits her escort at this stage, it should prove interesting to pause and reflect on some of the lighter moments that led to the present, as well as to confirm some of the vital statistics such as those that the dressmaker had to know, when she fashioned the alluring creation for the public to see.

Tackling the latter first and leaving the spice for last, a word may still be in order about the type of structure. Bridges are generally identified by the structural type of the main span, and classified as to size by the clear length between piers of that span.

This frequently leaves much unsaid about the balance of the structure which sometimes exceeds the scope of the main span. The three main spans of the Thatcher Ferry Bridge are properly considered as a unit and are accurately described as a cantilever, tied-arch combination. The approach spans are of the "deck" type (roadway on top) and are cantilever, simple-span combinations.

In technical parlance, the tied-arch of the central span is called a "suspended" span because of the manner by which it is attached to the adjacent cantilevers, but this does not make it a "suspension" bridge, since that term refers to the type that is supported by heavy main cables, rather than trusses, draped over high towers on the main piers.

In terms of size, Thatcher Ferry Bridge is one of the largest "South of the Border" but does not rank high among the large bridges of the world. It is properly compared in size only with other cantilever bridges and on that basis, its main span of 1,128 feet is less than two-thirds that of the world's largest cantilever bridge, across the St. Lawrence River at Quebec, Canada, and built many years ago.

Its total weight of structural steel, about 14,000 tons, is less than one-quarter that of the huge Quebec bridge.

ELMER B. STEVENS, resident engineer on the $20 million Thatcher Ferry Bridge Project at Balboa, is retiring early in 1963 after a quarter century of service with the Canal organization. From the time he graduated from the University of Vermont with a civil engineering degree until he joined the bridge project, he has spent a good part of his time designing and building bridges. He designed the Gatun Locks swing bridge and made the cost estimate for the bridge at Balboa on which the appropriation was based.

Its height of 201 feet above high water, however, places it among the highest in the world—for which the height was dictated by shipping requirements rather than natural terrain at the site. None is known to be higher in that artificial respect, though many bridges have greater clearances (height) that were dictated by the terrain at their sites.

Whatever the Thatcher Ferry Bridge lacks in size among the world's large bridges, however, it amply compensates as a symbol of unity. It is doubtful if any bridge in the world surpasses it as a uniting element between (1) two parts of a country, (2) two continents, (3) two peoples and, in the not-too-distant future, (4) the two parts of the world's greatest highway system.

The bridge is a fitting and proper sequel to the slogan coined during Canal construction days, "The Land Divided, the World United." We can now say, "The Land Reunited" with the secure knowledge that this fact further enhances world unity, and at a time when such unity is sorely needed.

At this point a fast curve is justified by the fact that articles have already been written on the sublime and the technical features of the bridge and we will now throw the switch that illuminates some of the lighter moments of the construction period.

There was the day, for instance, when an inspection party from the "Heights" arrived at the site of Pier 4 a few minutes ahead of the scheduled start of the footing pour. The concrete plant on shore had already been cranked up and the first delivery, consisting of a large bucket of grout (sand, cement, and water without large aggregate—fortunately!) was already on the way.

Told that they had only a few minutes to make their inspection, the party decided to take their chances and descended to the bottom of the cofferdam. In the meantime the grout arrived and the bucket containing it was hoisted over the receiving hopper, some 70 feet above the exposed rock within the cofferdam. At this point a workman,

(See p. 10)

TOP OF MAIN SPAN RISES TO 384 FEET

Type of Bridge:
- Three main spans—Combination cantilever-tied arch.
- Approach spans—Combination cantilever-simple spans.

Main span: 1,128 ft.

Clearance over water at mean high tide: 201 ft.

Maximum height: 384 ft.

Traffic lanes:
- On three main spans: 4.
- On approaches: 2 ascending and 1 descending.

Lighting: Mercury vapor.

Pedestrian walkway: One, 4 ft. wide.

Design Data

Loading: 20-ton trucks followed by 16-ton trailers. Also, 92-ton special load at slow speed.

Wind: 70 m.p.h.

Earthquake: 5 percent of dead load of superstructure.

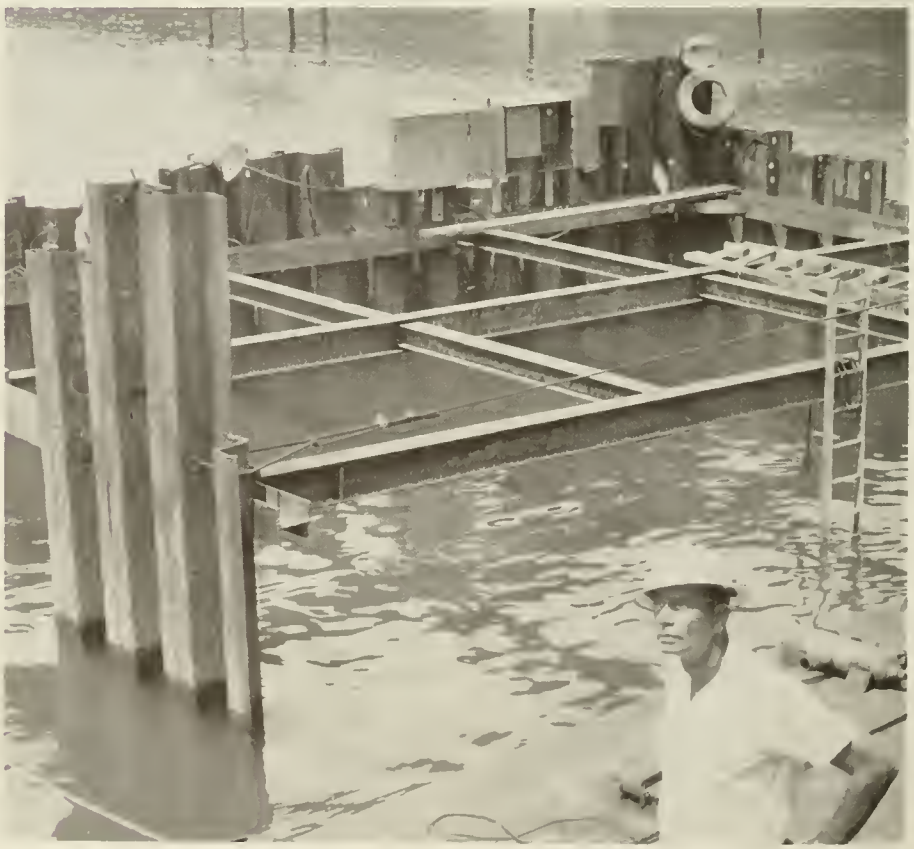
Foundation pressures:
- Pier 5: 15 tons/sq. ft.
- Other piers on rock: 20 tons/sq. ft.
- Caissons under land piers: 30 tons/sq. ft.

Longitudinal force: Friction at expansion bearings—20 percent of dead load supported.

Design criteria: Standard specifications for highway Bridges of the American Association of State Highway Officials.

Channel clearing enabled work barge to reach pier sites.

Pilings framework for cofferdam construction.



Ice Cream Afloat

ONE OF THE features of the British Shaw Savill round-the-world passenger liner *Northern Star* is an American-type soda fountain bar, equipped with the latest gear from the United States. The bar, which made a hit with the hundreds of young people traveling on the vessel, is located at one end of the sun-bathing deck near the approach to the three attractive swimming pools.

The tile-lined pools were built to provide bathing facilities for all types of swimmers from the paddlers and non-swimmers to the experts.

Lacy network of steel inside cofferdam for pier construction.

Materials Required

Approaches

Total length	12,986	ft.
Excavation	589,000	cu. yds.
Fill	688,000	cu. yds.
Spoil	444,000	cu. yds.
Paving—Concrete	59,000	sq. yds.
Paving—Asphalt	3,700	sq. yds.

Substructure

Concrete	31,500	cu. yds.
Cement	52,000	bbls.
Reinforcing steel	1,100	tons
Caissons, 36-in. diameter	7,500	lineal ft.

Superstructure

Structural steel—Carbon	6,250	tons
Structural steel—Alloy	7,450	tons
Cable suspenders	50	tons
Cast steel	150	tons
Reinforcing steel	625	tons
Total steel	14,525	tons
Concrete	6,000	cu. yds.
Steel floor grating	16,000	sq. ft.
Handrails	12,008	lineal ft.
Paint	20,000	gals.
Bolts, high tensile	350	tons.

Floating cranes' booms towered 400 feet high.

Land Reunited

(*Continued from p. 7*)

later professing innocence concerning the party below, opened the bucket gates and down went the grout.

Almost as if blown up by the same force that sent the grout down, the inspection party appeared top-side, bringing most of the grout back up with them on their persons. Soberly assured of an error, the inspection was called off, the inspectors went home, and the pour was resumed.

It is a matter of pure coincidence, of course, that the bucket operator got a 10 cents per hour raise starting that day, and that the Contractor's Project Manager was heard to remark that it was the first time in his life he ever had six inspectors lined up in his sights for one pull of the trigger!

There also was the time when a waterborne concrete delivery unit—an "LCM" with concrete buckets in this case—was being charged under the large collection hopper at Dock 7. When the buckets were filled, a malfunction of the hopper gates prevented their closure and the concrete kept on coming. The LCM operator began receiving shouted and conflicting instructions in two languages.

Before he could decide which order to follow, the LCM capsized and sank.

(NOTE—Fortunately this occurred toward the end of the pour and a "next" LCM was standing by to finish the deliveries.)

On other occasions, heavily-loaded delivery units capsized en route from Dock 7 to pier sites and the buckets had to be fished out from Captain Jack's harbor to prevent the possibility of their becoming a part of a ship's "wheel."

Lighter moments on the superstructure seemed to center around the period when final closure was being made on the big arch, although one of those moments was not so funny for the operators of a fat pool, based on the time of closure, who had to explain the circumstances under which the pool went to a high PanCanal official who later awarded an honor (?) to one of the engineers.

There was the iron-worker, for instance, who, in the absence of flags, wanted to place one of our lady's garments on the ceremonial (closing) piece of steel.

Through the entire construction period the keen interest of the public has been an inspiration, even if at the same time its occasional skepticism has been a problem. During the trying period when cofferdam plans were being revised "in mid-stream," it seemed difficult to assure the public that "there will be a bridge" and that the steel parts that later went together so rapidly and well, were, even then, being rolled, fabricated, and shop assembled.

The work going on at that very time, far from the site of the bridge, was the work that made the future rapid and spectacular erection possible.

Later on, as the two huge cantilevers were being erected from the main piers toward the mid-channel, it was evident that the public was experiencing more agony than the erectors as to whether or not the spans would meet, being unaware of the built-in devices that guaranteed a perfect closure before the first panel was ever cantilevered out over the water.

Finally, there was the staunch belief among the devoted public that the iron-workers were predominantly Indians, this being the result of past publicity given to a group of Mohawk Indians who are high iron-workers in the New York area.

Efforts were made to advise the public that these local "Indians" were predominantly converted cowpunchers from the plains of Texas. Some progress was being made until a photograph was published showing some iron-workers in action, including their names on the caption of the picture. All efforts at explanation were suspended when one of the names proved to be "Rain-water"! Sometimes you have to let the Public win!

Keep Moving!

TRAFFIC FLOW over the new Thatcher Ferry Bridge is expected to increase to 10,700 vehicles a day within the next year.

Approximately 8,200 vehicles now utilize the swinging bridge at Miraflores Locks and Thatcher Ferry facilities each day.

Currently, 2,300 vehicles travel daily between the City of Panama and the Interior of the Republic. The remaining 5,900 vehicles crossing the Canal are cars, trucks, and buses traveling between points bordering the Canal.

Piers, abutments completed in November 1961.

Board To Be Here

TRANSFER OF THE regular October meeting of the Board of Directors of the Panama Canal from Washington, D.C., to the Canal Zone makes it possible for the directors to be on hand for both the Thatcher Ferry Bridge dedication October 12 and the Stevens Circle dedication October 13.

Board members are the honorable Cyrus R. Vance, Secretary of the Army, stoekholder; Stephen Ailes, Under Secretary of the Army and board chairman; Fred Korth, George W. Ball, Clarence D. Martin, Jr., J. Kenneth Mansfield, John W. Martyn, C. Robert Mitchell, Walter J. Pearson, Howard C. Petersen, Dr. Charles J. Zinn, and James A. Williams.

Mr. Ailes, who, as a boy, knew Mr. Stevens very well, will be the speaker for the Stevens Circle ceremonies.

A joint Republic of Panama-United States of America Thatcher Ferry Bridge Dedication Committee is handling arrangements for that event.

With Will Arey, Panama Canal Information Officer, as chairman, other members are: Camilo Levy Salcedo, representing the Republic of Panama; Carl E. Davis, representing the U.S. Embassy; Lt. Col. Loehr M. Rigby, Jr., representing the Caribbean Command; and the following Panama Canal representatives:

Paul Ficzeri, Jr., Kerry B. Magee, J. M. Ruoff, N. B. Davison, W. E. Burns, L. B. Magnuson, Jerry Schear, Loron B. Burnham, Eleanor Burnham, Ivan D. Hilliard, E. M. Browder, Jr., Dwight McKabney, John P. Smith, Jr., and Richard C. Sergeant.

Elmer B. Stevens, bridge project resident engineer, has served as special advisor to the committee.

Shown as the first shovelfuls of earth marking start of construction of the bridge were turned December 23, 1958, are (left to right) former U.S. Ambassador Julian Harrington; former President Ernesto de la Guardia, Jr., of Panama; Roberto López Fábrega, former Minister of Public Works; and former Governor W. H. Potter of the Canal Zone.

Part of crowd gathered at groundbreaking ceremonies.

$75 Million Flows Into Panama Economy

DIVERSIFICATION was the key to the impact of Canal Zone dollars on the economy of the Republic of Panama during the past fiscal year. Expenditures for goods and services increased nearly 9 percent over the previous year, the total exceeding $75 million.

No single major project or handful of projects were responsible for the increase, as the gains spread into many nooks of Panama's economic life.

The amount going into the Republic's markets through direct purchases made in Panama by U.S. Government agencies, contractors, and private organizations was up 14 percent to nearly $23 million.

Net income to residents of Panama employed in the Canal Zone rose to nearly $33 million for a gain of almost 8 percent and estimated expenditures in the Republic by residents of the Zone topped $17 million for an increase of nearly 6 percent.

Supplementing the pattern of Panama's school expansions for development of human resources, on-the-job training of residents of the Republic on Panama Canal projects and with Zone agencies has enabled many of them to move higher up the ladder in private enterprise fields through their increased technical knowledge.

Available figures show employment of residents of Panama by U.S. agencies in the Zone and by contractors working for Zone agencies topping 14,000 for a rise of nearly 700 compared with a year earlier—and total wages in this bracket above $30 million for an increase of nearly $3 million.

This helped measurably toward the Republic's gross national product advance of 8 percent and per capita income gain of 5 percent for the last calendar year.

Dock and ship workers job reclassifications early this year resulted in wage increases of more than 20 percent for them and in April approximately 10,000 Panamanian employees of the Panama Canal got increases ranging up to 29 percent for skills recognition and providing more employee incentive.

Food products purchases by all Zone agencies in 1961 amounted to $2,721,000 for the calendar year 1961, for a gain of approximately $400,000. The trend is upward and a substantial increase is expected for 1962, possibly topping $3 million.

Gains were listed in five of the eight brackets (food products, beverages, construction materials, consumer items, services, and contracts) for a net increase of $350,000-plus in Panama

ZONE SPENDING IN REPUBLIC

	1961	*1962*
Estimated expenditures made in Republic of Panama by residents of the Canal Zone	$16,316,000	$17,252,000
Estimated net income to residents of Republic of Panama employed on the Canal Zone	30,491,000	32,877,000
Direct purchases made in Panama by U.S. Government agencies, contractors, and private organizations [1]	20,140,000	22,959,000
Annuity paid to Panama	1,930,000	1,930,000
Total	$68,877,000	$75,018,000

[1] Excluding purchases made in Panama by contractors for use in military and private projects in the Canal Zone.

Panamanians hold key posts in many fields.

Canal purchases during the 1962 fiscal year.

In May, under an agreement with the National Cattlemen's Association of Panama, the Panama Canal began buying 10,000 quarts of raw milk per week from Panama producers. It is delivered to the Mount Hope plant for processing and bottling. This has meant an average flow of about $8,000 a month into the Panama economy and it appears likely that milk purchases from Panama sources will be approximately doubled next year.

This is contingent upon the arrangement proving satisfactory during the initial 12-month period. To date it has proven satisfactory and if supply survives dry season problems there appears little doubt that the purchases will be doubled.

With all Panama Canal and Zone agencies contracts up at least $2½ million for the past fiscal year, the number of bags of cement purchased provided a key index: 127,680 for 1962 compared with 78,300 for 1961.

In accord with Panama Canal policy to purchase from Panama sources whenever possible when quality and prices of products are comparable, the dollars to Panama trend is continuing upward.

Added to this list most recently are paper bags and cellophane and part of the kerosene supply now is being bought in the neighboring Republic, with refinery products purchases expected to increase further. Panama's first petroleum refinery, built at a cost of $30 million, opened this year and is delivering petroleum products to oil companies that have distribution facilities in the Canal Zone and throughout Panama.

Not included in the solid gross purchases figures are items purchased through agents in Panama. These include many groceries, housewares, major appliances, some toilet articles, cosmetics, stationery, and other consumer goods.

Two main factors are important in volume of agricultural produce Panama Canal facilities acquire from the Republic:

With this base, there's an assured minimum market if quality meets standards. And if it meets standards, it also meets world standards for domestic outlets or export to other Latin American countries and into the world market.

Deliveries keep retail store unloading zones busy.

Further quality improvement is expected with the Republic's farm-to-market road program being expanded. On-the-farm quality has met or surpassed minimum standards in many produce lines, but the transport problem has curtailed the marketing field.

Beef, cabbage, and tomatoes remain the big item purchases from Panamanian sources in the food products lines.

The expenditures by the Panama Canal and agencies located in the Zone made a notable contribution to the total Republic of Panama economic activity, which closed the last calendar year on a high level, showed a more than seasonal upturn at the start of this year and may have reached new highs through midyear.

The new Panama City terminal marketing facility for fruits and vegetables opened in April. It was built at a cost of $35,000, with $23,000 worth of equipment financed by AID and another $29,250 worth of equipment ordered recently is being financed by AID funds.

This facility is part of a joint agricultural marketing project directed toward the goals of improving distribution within the domestic market, supplying Canal Zone requirements, and developing export outlets.

Among the larger contracts let were those for the Cardenas housing extension, being handled by the Federal Aviation Agency for National Institute of Health, Middle America Research Unit, and for modification of hangars and to rehabilitate housing and barracks at Howard Field as a result of relocating some flying activities to that field from Albrook AFB.

Supply, processing, transport play vital roles to meet increasing demands.

AMBASSADORS OF GOOD WILL

Camera Clubbers Americans Who Know The Americas

WHEN IT COMES to "Americans knowing the peoples of the Americas," members of the Diablo Camera Club stand second to none.

In its short 17-year history the Club has made so many field trips into Panama and air flights to neighboring countries that no one knows the actual count.

Last year the club members spent intensive 3 and 4 day weekends in Guatemala's jungle ruins at Tikal; Trinidad; Santa Marta, Colombia; Quito, Ecuador; San Andres Island (Colombian); and Christmas at Bogota.

And every trip, proudly relates Club President Cecil Vockrodt, a military civilian employee, "was in a COPA plane (Compañía Panameña de Aviación, S.A.) and every time the pilot was 'Mike' De Puy." Miguel De Puy and his popular wife, Roma, are honorary members of the Club. Last August the President of COPA, Carlos Icaza, presented the Club a special scroll for having shown 15 consecutive years of confidence in this well-known Panamanian airway.

Preston Minton, a Pacific side "Corral" employee, is the Club's unanimously elected tour leader, bottle washer, wet nurse, and documentary clerk extraordinary.

On a memorable trip to Manizales, Colombia, 3 years ago, he recalls wistfully, "We arrived at the height of the coffee festival, but all our other arrangements fell through." Club members quickly divided into splinter groups, some to secure coffee and chowder, others to locate quarters and still others to get towels, linens, and mattresses. Minton recalls that through sheer luck a vacant house was found. It cost more than $170 for 3 days—and the place was really packed.

(Manizales was one of the cities seriously damaged by the earthquakes that killed more than 30 persons in Colombia last July 31.)

A somewhat similar experience with

Like salt goes with pepper, so the Diablo Camera Club flies with Miguel De Puy at the controls. The popular "Mike" of Compañía Panameña de Aviación (COPA) poses in front of a trusty Camera Club steed prior to a recent takeoff.

Gonzalo Restrepo A. (on right) one of Colombia's leading architects and president of the Medellin Camera Club, is shown accepting a gift scroll from the Diablo Camera Club. The presentation was made by Diablo Club president Cecil Vockrodt (left of scroll) during a cruise aboard Las Cruces in Gaillard Cut to which the local club treated the visiting Medellin club. The Diablita on the far right is Verona Vockrodt, wife of the Diablo president.

tragic overtones was the flash flood that stranded the Club at Santa Marta, Colombia, a year ago last September. It washed out the town's railroad system, all bridges, and undermined the foundation of the hotel in which the members were staying.

Since the members had bused from Barranquilla, they had to return there by plane. But not until Minton had cleared the Santa Marta airport runway of debris by personally piloting a tractor and radioing Barranquilla for a DC-3 shuttle service. He also set up a system of priorities so that Colombian doctors, who had been holding their national convention at Santa Marta, could fly out first to attend to operations they had scheduled.

While waiting for the evacuation, Club members manned the galleys in the hotel for the Club and other guests, boiled all the water (the water system had broken down) and used Minton's chlorine pills for the reassurance of all.

Every place the Club has visited, proudly notes former president Charles McG. Brandl, Canal engineer in charge of the cut-widening project, it has been invited to return.

Among some of the local field trips the Club has taken during the past year were visits to the Colon Free Zone where a talk was given by the Free Zone Director, José D. Bazán, who is Panama's Second Vice President; a tour of the Refinería Panamá near Colon; a trip through the Panama Boston Company's oleo plant in Panama City; and the annual visit to the Finca Bermejal of Eduardo Cucalón near Chepo.

Mr. Cucalón and his wife, Delia, and the De Puys are the only honorary members of the Club, whose membership is limited to 150 persons living on the Canal Zone.

Club members, who use only Panamanian commercial vehicles for their local trips, even for jaunts as close as the National Museum in Panama City, have been to Costa Rica six times in 6 years. They know Ocu and downtown David like the palms of their hands. In Colombia a President of that nation has greeted them and they have been guests at the private home of an ex-president twice. In fact, on a recent visit to Medellin, Colombia's second largest city, a plane load of high Colombian Government officials flew in from Bogota just to be with the group during one of its long weekend visits.

The Club has visited Peru, Salvador, and Venezuela and has been to Jamaica, the Virgin Islands, and Curacao a number of times. It has been praised by numerous foreign dignitaries as well as U.S. Embassy representatives as being Ambassadors of Good Will Extraordinary.

Since the Club departs from Tocumen Airport, it flies under Panamanian documentation and it is rare for the Club members not to be met on arrival at foreign points by the local Panamanian Consul. Local hosts repeatedly tell Club members "We look forward to the return of our Panamanian friends."

Last year the Canal Zone Club had the pleasure of playing host to the Medellin Camera Club. The Medellin visitors enjoyed the Canal Zone and Panama so much that some of them have made return flights to visit with their Diablo Camera Club friends.

A flash flood in Santa Marta, Colombia, didn't stop the Diablo shutterbugs even though it caught the city unawares and caused extensive damage, including the ruin of the hotel in which this picture was taken. Wading through the flooded dining room with a camera around his neck is Club president Cecil Vockrodt.

Members of the Medellin, Colombia, Camera Club recently visited the Isthmus as the guests of the Diablo Camera Club. The visitors pose for a picture upon their arrival at Tocumen Airport.

GEOLOGISTS TRY THEIR FINS

SKINDIVING is definitely not on the list of skills expected of a Federal geologist or engineer. But when the Canal found it necessary to study the design of a possible new reserve water supply for putting ships through the hilltops, two Engineering Division employees donned masks, oxygen tanks, and fins for prowls around the bottom of Gatun Lake.

Swimming among the algae and moss-festooned trunks of dead trees that were inundated when the lake filled up 50 years ago, Engineering Geologist Robert H. Stewart and Soils Engineer Anthony P. Mann saw with their own eyes the kind of earth that exists at various points along the proposed site for a big earth-and-rock dam for water storage.

If built, the dam will add 44½ percent to the Canal's present capacity to store water against the annual dry-season shortage. This will be the waterway's first reserve storage project since Madden Dam and Lake were built in the 1930's.

The proposed dam would take perhaps 5 years to complete. But it could impound some 430,000 additional acre-feet of water. An acre-foot is a unit of 1 acre in area, 1 foot deep. The Canal now has usuable storage capacity of 445,000 acre-feet in Madden Lake, 520,000 in Gatun—a total of 965,000 acre-feet.

The new dam could solve the problem of having enough water to serve ship-transit demands for the foreseeable future.

On the basis of what the skindiving revealed and mechanical tests including results of deep borings for earth and rock samples, Geologist Stewart will be able to recommend the alignment for the dam. Specifications also will be prepared as to the dumping of spoil from other work plus material which must be specially excavated. The work would be done under contract.

Proposed Dam Could Hike Water Storage 44½%

Still in the advanced-study stage, but approved in principle by Gov. Robert J. Fleming, Jr., and the Board of Directors, tentative plans call for an approximately 2-mile long rock fill to be piled along a dog-leg course across the western arm of Gatun Lake, where it reaches deep into a sector of indented jungle shoreline and islands commonly known as the Trinidad area.

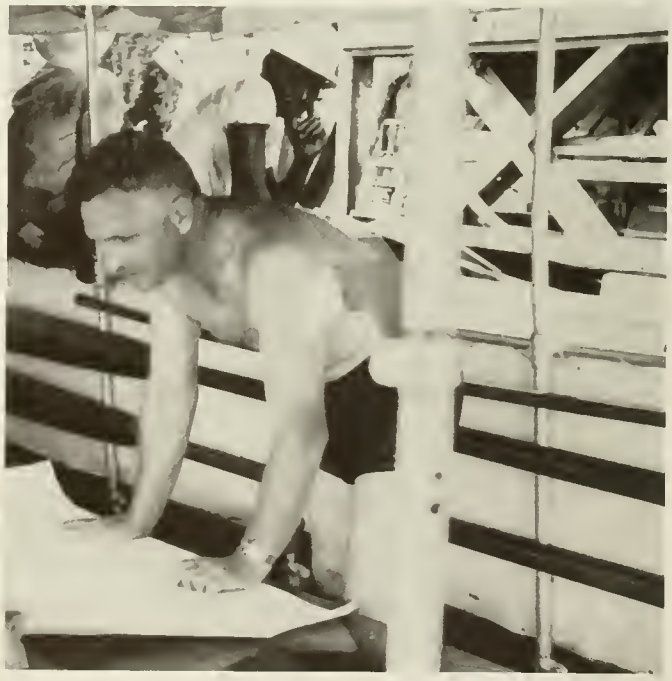
The dam itself would be wholly within the Canal Zone, and the areas along which it would raise the water level by some 10 or 11 feet also are a part of the Zone. This would move the shoreline back between 50 and 100 feet in most places, a little more in others. Canal Zone jurisdiction extends inland from the banks of Gatun Lake in this area to a point 15 feet higher in altitude than the lake's normal height of 85 feet above sea level.

Preliminary plans call for alignment across Guacha Island and much smaller Tern Island. Both islands are readily visible from the main Canal channel between Gatun Locks and Barro Colorado Island—the wildlife preserve.

Guacha Island would form the base of a combined single lock and spillway. Through this, passenger and garden produce launches, police, and fishing craft would be able to navigate readily into the western reaches of the lake just as they do now.

There are few roads in the Trinidad area of the Republic of Panama. Beyond the shoreline of the lake live many Panamanian villagers and small farmers who now use the lake for access to the

Unusual for a woman, but not at all phenomenal for Mrs. Joanne Allen, a Canal geologist, was an assignment on the drillboat to measure, inspect, and file for reference core samples of rock and earth brought up at Booby Island near the southern terminus of the proposed dam. Mrs. Allen earned her B.S. in geology at Kansas State University. She came to the Isthmus 3 years ago, is the mother of two boys. Assisting her with the samples is driller helper José Ríos of Panama.



After a preliminary underwater inspection of the nearby lake bottom, Robert H. Stewart, the Canal's geologist, doffed his skindiving gear to check findings with a map aboard the launch Shearwater, which was serving as a tender for the drill barge. Borings for soil core samples were being taken at a depth of 120 feet. At a nearby location, borings will have to go down 250 feet.

Gatun boat landing en route to the Panamanian port city of Colon. This they would continue to do.

The jungle-grown top of Tern Island has been partially cleared by Canal survey forces. It was formerly a hill and probably will be leveled off if it becomes part of the dam.

The Dredging Division will employ a time-tried technique, using what has been called a "submarine bulldozer" to clear underwater stumps and trunks. A barge, weighted down with concrete pilings so that it rides 20 feet below its normal draft, would be pushed through the dead timber by a tug. Whatever this does not knock down or push over can be dynamited.

Width of the storage dam at its base might vary from 500 to 1,000 feet on either side of its centerline, depending on further geological studies to find a solid base.

Much already is known about what lies under the lake waters in this fairly hilly area. When glaciers were covering North America in the last Ice Age, the Isthmus was wider and stood much higher out of the sea than it does now. As the ice melted, the sea encroached. Then the rivers brought down muck and silt, depositing them in what had been the valleys to form swamp areas near sea level at many points.

Geologists now must learn the depth and character of these deposits, particularly those in an old geologic area in what was once a valley between Guacha Island and the mainland.

Many of the problems foreseen in building the dam are not unique, though Canal experts believe the structure may be a "first" in one respect. There is no record of a previous attempt to build a rock-fill dam under water. But Canal engineers think they can do it, despite the heavy flow from this end of the lake during seasonal downpours. Present plans contemplate a rock-fill dam that will be blanketed with earth for watertightness.

In this big rock-piling project, it is planned to make maximum use of the spoil already loosened and ready for moving from Las Cascadas Reach and the material to be excavated under the new contract to widen the Canal "Cut" all the way to Gamboa.

This rock spoil must go somewhere. By dumping it at the dam site, the Canal's need for a wider channel also would contribute to making sure there will be enough water storage capacity to float all ships seeking transit during the next few decades.

Soils Engineer Anthony P. Mann adjusts his skindiving equipment for a foray among the dead stumps on Gatun Lake bottom to observe terrain conditions.

Survey crews recently cleared part of Guacha Island, which could be leveled off to become part of the proposed dam near its southern terminus. Spoil would be dumped to fill in the passage (right) between the island and the mainland.

Are YOU a Delinquent?

"THERE ARE 50 million vision delinquents on the street," says the American Optometric Association, and this number undoubtedly includes many thousands of people wearing out of date eyeglasses.

With one-fourth of the population requiring vision care, treatment or correction, business, industry, and schoolwork can't proceed at the best possible level of efficiency. Poor work, an adverse effect on the individual's overall health, and a tragically high incidence of accidents often are the result of vision defects. See page 19 for warning signs.

MORSE CODE, a skill which John A. Morales learned while in radio school in the Navy, is now being passed on to a group of young people.

Although the Accounting Division employee says he is a bit rusty, Mr. Morales still is able to keep the attention of the students who gather around his dining room table every Tuesday and Thursday evening at 6.

An average evening's class begins with a short recall session. "What is 'A'? 'Z'? 'K'? Send your name on the key." Then there is practice in receiving. For this purpose, Mr. Morales uses a recording of different letters in code. Students are expected to take down what the code represents.

Classes are held for 8 weeks and the students aspire to a goal of five words per minute, sending and receiving.

Youngsters Try Hands At Code Keys

Successful completion of a course of this nature is required for the first class Boy Scout rating and the speed of five words per minute entitles the Boy Scouts to a merit badge. Those who wish may go on to try for the novice "ham" radio license, which involves more technical radio knowledge in addition to skill in code.

The first of three classes which Mr. Morales has started was held in the summer of 1961 with a group of 11 Boy Scouts. His son, John, who now acts as an auxiliary instructor, began his training in this class.

A recent class was a bit unusual, because for the first time two girls slipped in. The girls, Gail Harrison and Jeanette Morales, seemed to be keeping up with the lessons at least as well as the boys; at least they had as much fun.

SCHOOL CALENDAR 1962-1963

End of first grading period	October 19
Panama Independence Day (holiday)	November 2
Veterans Day (holiday)	November 12
Thanksgiving holidays (4 days)	November 22-25
End of second grading period	December 7
Christmas holidays (11 days)	December 22—January 1
End of third grading period	January 25
Washington's Birthday (holiday)	February 22
End of fourth grading period	March 8
Easter holidays (9 days)	April 6-14
End of fifth grading period	April 26
Memorial Day (holiday)	May 30
Commencement	June 4
End of sixth grading period	June 5
Schools close	June 5

Budding Morse Code operators get checked by instructor John Morales of the Accounting Division. From left to right seated are Ralph Stinson, Lars Morales, and Jeanette Morales. Standing are Harry Stinson, Mr. Morales, John Morales, Jr., and Gail Harrison.

Dedicated-

(*Continued from p. 3*)

Canal workers, Mr. Thatcher made every possible effort to obtain approval by the U.S. Congress of a law which was passed in 1944 giving disability retirement benefits to non-U.S.-citizen employees of the Panama Canal. This legislation has benefited thousands of Panamanians as well as a number of employees of other nationalities.

The work done by Mr. Thatcher on behalf of the Isthmian community did not go unrecognized. During a meeting held July 30, 1930, the Federation for Highway Education unanimously approved a motion asking that former Gov. Harry Burgess of the Canal Zone give the name "Thatcher Highway" to the road between Balboa and Arraijan.

Perhaps it was this eloquent demonstration of public affection which inspired the U.S. Congress to pass Public Law 87-125 which gave the name of the well-known "Governor" to the magnificent bridge which unites the Americas, an action which has been termed by former Panama President Dr. Ricardo J. Alfaro an "act of justice and a well deserved tribute."

A gesture of recognition was made by the residents of the town of Arraijan who gave Mr. Thatcher a parcel of land in that area in gratitude for the part he took in the development of the town. On his part, Mr. Thatcher has set aside this lot for the construction of a children's playground which has been named in his honor.

The Government of Panama also has honored the distinguished Canal pioneer by presenting him the Order of Vasco Núñez de Balboa with plaque. Ecuador has given him the Order of Merit and the Order of the Eloy Alfaro Foundation. In 1930 he received the Order of Bolívar from Venezuela when he visited Caracas as a member of a committee which presented Venezuela a statue of Henry Clay.

An enthusiastic promoter of Pan American ideals, Mr. Thatcher stated recently: "I have done whatever I could to promote good relations between Panama and the United States; I will always try to see that the Republic of Panama receives just treatment and I believe that I can depend on the good will of the Panamanian people."

In addition to the honors which Mr. Thatcher has received from Panama, Ecuador, an Venezuela, all proof of the high esteem in which he is held, he recently was presented the pen which President Kennedy used to sign the law naming the new bridge across the Panama Canal "Thatcher Ferry Bridge."

THE 'EYES' HAVE IT

SEE? IT'S NOT SIMPLE

GOOD VISION is an important factor in preventing accidents at work, on the road, and at play. Emphasizing vision to all is a safety asset; therefore, good vision is now considered "a family affair." Adults and children must make the most of their eyesight by having an annual check-up.

Neglecting youngsters' vision is inexcusable for parents who try to give their children everything they need for a successful future. At the same time, parents have an obligation to safeguard their own vision through eye correction and eye protection.

Vision requirements change. The visual demands of modern life can't be compared to those that confronted our own grandparents.

Work, reading, television, driving a car, all call for special requirements from the eyes. Demands can be summed up in six basic areas: Good distance acuity, depth perception, good fields of vision, good eye muscle balance, good near point vision, and good color discrimination.

A person doesn't have to be "in the dark" about visual abilities. You can test yourself in all six categories for indications that professional help is required.

Eyes have good distance acuity when able to focus and see clearly singly and together for distance.

How's depth perception? That's a question of judging correctly the distance between oneself and other objects, even when both are in motion.

You have a good field of vision if you can see over a large area on the horizon as well as up and down without moving your eyes. This includes seeing things moving in or out from the sides.

Muscle balance means ability to focus the eyes simultaneously and with ease at a given object at varying distances.

If one can see accurately and concentrate on close detail for long periods of time without discomfort, near point is good.

Color discrimination means the ability to identify colors and hues accurately.

Other vision problems:

Some people may move frequently from areas of poor illumination to good lighting and vice versa. Can you adjust readily and see adequately under either condition?

How's your glare recovery? Driving along a highway at night, does vision return to normal efficiency in 1 or 2 seconds after a car with glaring headlights has approached and passed?

Admittedly, a do-it-yourself eye test is far from acceptable as a judge of whether vision is up to date or still in the "dark ages."

A once-a-year visit to the optometrist is the modern way to safeguard eye health. Deficiencies do not develop in a few days or weeks. There is a gradual lessening of ability. The optometrist is the doctor who can detect a lapse in any area of vision deficiency and direct its correction.

Perhaps the most inexcusable mistake is to be fitted with a pair of corrective eye glasses and continue to use them for years without re-examination. Not only work but play is affected. As work requirements change, and leisure time activities vary from year to year, corrective lenses should be brought up to date at the same pace.

ACCIDENTS

FOR THIS MONTH AND THIS YEAR

AUGUST

	FIRST AID CASES		DISABLING INJURIES		DAYS LOST	
	'62	'61	'62	'61	'62	'61
ALL UNITS	248	258	13	12	281	781
YEAR TO DATE	1990	2552(699)	85	96(4)	7948	14995(95)

( ) Locks Overhaul Injuries Included in total.

CANAL HISTORY

50 Years Ago

ROADS WERE being resurfaced in the Canal Zone 50 years ago and the Canal Zone Police were being reorganized, but there was little work for the traffic police. According to a note in the *Canal Record* there were 65 automobiles licensed to travel in the Canal Zone in 1912. Of these, 14 were the property of residents of the Canal Zone and the remainder were owned by citizens of the Republic of Panama. All were passenger vehicles with the exception of a motor wagon used at Mount Hope and Cristobal. There were, in addition, 31 motorcycles licensed.

Plans for construction of the superstructure of the Atlantic terminal docks at Cristobal were being prepared in October 1912. The committee in charge recommended that in view of uncertainty existing as to the amount of freight to be handled at the Atlantic terminal after the completion of the Canal work, no cargo handling cranes or special unloading appliances were to be installed with the exception of unloading masts designed for holding blocks and falls.

Total enrollment of the Canal Zone schools for the first week ending October 4, 1912 was 1,000.

25 Years Ago

BECAUSE OF THE tense international situation 25 years ago this month, fears were expressed in Washington that ratification of the new treaty between the United States and Panama would be delayed. Objections to certain terms were reportedly being made by the U.S. War Department.

Spy fever hit the Canal Zone as the *Panama-American* reported that two Japanese who had been guests at the Tivoli were seen taking pictures of the Pacific Locks, Madden Dam, and Gaillard Cut. These pictures, the paper said "would be of the greatest military value to an enemy of the United States."

Officials of the Panama Pacific Line announced that they would remove their three large passenger vessels from the inter-coastal run through the Panama Canal and put them on a new service between New York and the east coast of South America. A report from Washington, D.C. stated that the new regulations for Panama Canal tolls might have been one of the reasons for the proposed transfer.

Meanwhile, Col. Glen E. Edgerton, Engineer of Maintenance, announced that construction had begun on the three new Panama Railroad Steamship Line vessels and a visiting U.S. Congressman said appropriations totaling $1 million were to be made for construction of quarters at the Fleet Air and Submarine Bases at Coco Solo.

10 Years Ago

MORE THAN 1,200 Panama Canal employees met in Balboa Stadium in October 1952, to protest what they called an "unjust and unreasonable increase in rent" on Canal Zone quarters. They asked for a congressional investigation not only of rents but of the entire Panama Canal operation. Gov. J. S. Seybold refused a Central Labor Union request for a 6 month's extension on the Panama Canal rent increases but approved of the employees' collective effort to seek reconsideration in Washington of the rental increase.

During the same month, Balboa Heights announced that approximately $5 million would be spent on the Canal's two principal housing projects on the Pacific side during the fiscal year quarters construction program. The plans called for the construction of units for 168 families at the new Corozal townsite and along Empire Street in Balboa.

A new record for the number of commercial ships to transit the Canal in 1 month was set in October 1952, when 674 ships of 300 Panama Canal tons or more were put through the Canal. Tolls and ship tonnages also hit a new high.

Meanwhile, Panama Canal authorities announced that steps were to be taken to increase the capacity of the Canal.

One Year Ago

AN INCREASE in medical assistance for disability relief annuitants of the Panama Canal was approved by the Board of Directors. The plan for further extending medical assistance to the annuitants called for expanding visiting nurse service, furnishing drugs free of cost when ordered by physicians and the employment of two part-time doctors.

Preliminary work was started on a $927,000 contract providing for the construction of 100 quarters in the townsite of Pedro Miguel. The housing units are part of the replacement housing to be built in the Canal Zone as part of the Nine-Point Program of benefits to Panama.

These are members of the Colombian Kart Club who made a clean sweep of the Labor Day Kart Championships in Ancon and contributed $200 to the United Fund. The sole girl on the team, Christiane Bigot, is third from the left. Her teammates were Mario Gómez, Víctor Barreto, Edgar Cárdenas, Mario Correa, and Elías Matroni. Gabriel Campuzano was head mechanic. All are from Bogota, Colombia.

ANNIVERSARIES

(On the basis of total Federal Service)

40

MARINE BUREAU

Balbino Caldito
Deckhand

Elías A. Girón
Helper Boilermaker

SUPPLY AND COMMUNITY SERVICE BUREAU

Marcus S. Clarke
Laborer

TRANSPORTATION AND TERMINALS BUREAU

Valentine N. Gordon
Clerk

30

ADMINISTRATIVE BRANCH

Lloyd W. Peterson
Transportation Assistant

HEALTH BUREAU

Leon F. Small
File Clerk

MARINE BUREAU

William R. Dunning
Lock Operator Machinist

Jerome Bennett
Deckhand

Ronald D. Williams
Launch Dispatcher

OFFICE OF THE COMPTROLLER

Ralph K. Skinner
Staff Assistant to the Comptroller

James L. Fulton
Chief, Rates and Analysis Branch

Jack K. Campbell
Auditor

SUPPLY AND COMMUNITY SERVICE BUREAU

Vernon B. Berry
Meat Cutter Assistant

Cora G. Charles
Housekeeping Assistant

Rupert L. Yard
Motion Picture Projectionist

TRANSPORTATION AND TERMINALS DIVISION

Joseph W. Farquhar
Clerk

Cyril I. Pessoa
Dock Maintenanceman

Allan Toussaint
Oiler

20

ADMINISTRATIVE BRANCH

Mario Torres
Bookbinder

INTERNAL SECURITY OFFICE

Berta I. Quinn
General Investigator

CIVIL AFFAIRS BUREAU

Hiram Overall
Police Sergeant

Charles R. Bowen
Instructor

ENGINEERING AND CONSTRUCTION BUREAU

Joseph L. Gwinn
Electrical Systems Inspector

George Murray
Navigational Aid Worker

Edward B. Parker
Central Office Repairman

James W. Riley
Central Office Repairman

Armando Palmer
Seaman

Gilbert W. Card
Seaman

Eberto Tesis
Seaman

Manuel Pereira
Carpenter

Coleridge Crawford
Carpenter

George N. Rawlins
Carpenter

David N. Benard
Sandblaster

Jesús Martínez
Asphalt or Cement Worker

Nelson O. Williar
Leader Joiner

Joseph Francis
Launch Seaman

HEALTH BUREAU

Grace Belden
Medical Typing Assistant

Samuel M. Gaynor
Meat Cutter Assistant

George S. Robinson
Hospital Laborer

MARINE BUREAU

R. F. Huldtquist, Jr.
Chief Engineer, Towboat or Ferry

Thomas W. Gove
Pilot

William Nieves
Towing Locomotive Operator

Clifford A. Thompson
Helper Lock Operator

Agustín Romero
Asphalt or Cement Worker

Melchor Martínez
Maintenance Painter

Oscar S. Mingo
Helper Lock Operator

Prince Alford Jones
Helper Lock Operator

Hortensio Gutiérrez
Maintenance Painter

Doreteo Aguilar
Line Handler

Rupert E. Belenfante
Teletypist

José M. Quiroz
Line Handler

William H. Cox
Guard

Ricardo Morán
Maintenance Painter

Alberto Alvarado
Asphalt or Cement Worker

Mauricio Cañas
Helper Marine Machinist

Charles J. Palles
Sheetmetal Worker

Conrado Saldaña
Launch Seaman

SUPPLY AND COMMUNITY SERVICES BUREAU

Vicente Lucena
Leader Heavy Laborer

José D. DeLeón
Utility Worker

Geraldine W. Allen
Counter Attendant

Oscar A. Landaverde
Heavy Laborer

Ruby R. Lynton
Stock Control Clerk

Lila Belén
Salesclerk

F. E. Thompson
Cook

José Valladares
Milk Plant Worker

Clara Cox Pimento
Stock Control Clerk

Victor A. Marks
Guard

Joseph Parks
Dry Cleaning Presser

Leonora W. Fearron
Food Service Sales Checker

Elexander Francis
General Foreman Stockman

TRANSPORTATION AND TERMINALS BUREAU

Ivanhoe Donawa
Water Service Man

Ignacio Córdoba
Railroad Trackman

Melford L. Matthews
Stevedore

F. Hinestroza
Helper Electrician

Wilfred Walker
Cargo Marker

Geraldo A. Myrie
Truck Driver

John M. Quinland
Clerk

Juan F. Estrada
Helper Automotive Mechanic

PROMOTIONS AND TRANSFERS

August 5 through September 5

EMPLOYEES who were promoted or transferred between August 5 and September 5 are listed here. Within-grade promotions and job reclassifications are not listed:

OFFICE OF THE GOVERNOR-PRESIDENT

Annie R. Rathgeber, from Clerk-Typist, License Section, to Secretary (Typing), Panama Canal Information Office.

ADMINISTRATIVE BRANCH

Catherine I. Oliver, from Clerk-Stenographer to Secretary (Stenography).

CIVIL AFFAIRS BUREAU

Frank Thomas, from Chauffeur, Gorgas Hospital, to Detention Guard, Police Division.

Ruben H. Austin, Clerk-Typist, from Maintenance Division to Fire Division.

Patricia P. Bonnifield, from Clerk-Typist, Gorgas Hospital, to Library Assistant, Canal Zone Library.

Postal Division

William M. Jensen, Lealand A. Larrison, from Finance Branch Superintendent to Relief Supervisor, Balboa.

Donald L. Nolan, from Theater Doorman, Supply Division, to Substitute Window Clerk.

Division of Schools

Helen M. Starr, from Elementary School Teacher-Principal to Elementary School Principal.

Ruth H. Amedee, from Substitute Teacher, Latin American Schools, to Elementary Teacher, Latin American School.

Alice M. James, from Clerk, Supply Division, to Clerk-Typist.

Ann B. Kennon, from Theater Usher, Supply Division, to Recreation Specialist.

Lanty Patrick, from Laborer Cleaner to Leader Laborer Cleaner.

ENGINEERING AND CONSTRUCTION BUREAU

Hernan A. Sedda, from Cartographic Compilation Aid to Surveying Technician, Engineering Division.

Kenneth F. Brassel, from Pipefitter, Industrial Division, to Plumbing Inspector, Contract and Inspection Division.

Electrical Division

Charles J. Holmes, from Construction Inspector (General), Contract and Inspection Division, to Shift Engineer (Mechanical).

Milton M. Lacroix, Robert J. Roy, from Lock Operator Machinist, Locks Division, to Shift Engineer (Mechanical).

Domingo D. Hinds, Paul W. Kramer, Jr., from Marine Machinist, Industrial Division, to Shift Engineer (Mechanical).

Ruth E. Clement, from Clerk-Typist to Accounts Maintenance Clerk.

Julio B. Pinillo, from Palancaman to Maintenanceman.

Alfred Leacock, from Helper Cable Splicer to Maintenanceman Distribution Systems.

Viberto B. Weekes, Warehouseman, from Supply Division.

Basil C. De Sousa, from Laborer Cleaner to Helper Maintenance Machinist.

Vernon R. Roberts, from Utility Worker, Supply Division, to Laborer Cleaner.

Dredging Division

Edward J. Russell, Jr., from Supervisory Typing Clerk, Locks Division, to Property and Supply Clerk.

Manuel A. Richard, from Floating Plant Fireman to Floating Plant Water Tender.

Murphy Robinson, from Seaman to Leader Seaman.

Patricio Martínez, Luther B. Ward, from Launch Seaman to Seaman.

Fidencio Echaverra, Sotero García, from Boatman to Launch Seaman.

Sidney O. Beckford, Humberto E. Santamaría, from Boatman to Seaman.

Dalton R. Ferdinand, from Helper Marine Machinist to Floating Plant Fireman.

Claud A. Morant, from General Helper to Seaman.

Maintenance Division

Albert H. Plumer, from Leader Refrigeration and Air Conditioning Mechanic to Lead Foreman, Refrigeration and Air Conditioning.

John H. Childress, from Refrigeration and Air Conditioning Mechanic to Leader Refrigeration and Air Conditioning Mechanic.

James R. McCarrick, from Towing Locomotive Operator, Locks Division, to Sheetmetal Worker.

Dawson G. Jolley, from Work Orders Clerk to Accounts Maintenance Clerk.

Isidro Nogueira, from Heavy Truck Driver to Electrical Equipment Repairman.

Harry A. Jones, Truck Driver, from Supply Division.

HEALTH BUREAU

Cecil A. Springer, from General Medical Supply Clerk to Supervisory Medical Supply Clerk, Coco Solo Hospital.

Blas Romero, from Laborer, Maintenance Division, to Heavy Pest Control Laborer, Division of Sanitation.

Gorgas Hospital

Dr. Leo P. Biese, from Medical Officer (General Medicine and Surgery), to Medical Officer (General Practice).

Dolores Espinosa, from Staff Nurse (Operating Room), to Nurse Supervisor (Operating Room).

Mary Basso, Elizabeth M. Hayden, Irene A. Sandberg, from Staff Nurse to Staff Nurse (Medicine and Surgery).

Lloyd M. Tait, from File Clerk to Clerk.

Corozal Hospital

Kathleen I. M. Nelson, from Nurse Supervisor (Psychiatry), to Director of Nursing.

Gloria J. Hallett, from Head Nurse (Psychiatry), to Nurse Supervisor (Psychiatry).

MARINE BUREAU

Navigation Division

Madeleine M. Deraps, from Stock Control Clerk, Industrial Division, to Timekeeper.

Jaroth E. Archibald, Theodore A. Brathwaite, Victor A. Harrison, Albert S. Hunter, Willesty Mitchell, from Launch Seaman to Launch Operator.

Barrington A. Smith, from Seaman to Launch Operator.

Albert A. Waisome, from Heavy Laborer to Seaman.

Prince M. Grant, from Heavy Laborer to Warehouseman.

Locks Division

George C. Scheibe, from Lead Foreman, Lock Operations, to General Foreman, Lock Operations.

Robert T. Thomas, from Leader Lock Operator Electrician to Lead Foreman Locks Control House.

Leon S. Fishbough, from Lock Operator Machinist to Leader Lock Operator Machinist.

William B. Redmond, Russell V. Severance, from Lock Operator Electrician to Leader Lock Operator Electrician.

Oliver G. Paterson, from Towing Locomotive Operator to Lock Operator Machinist.

Edward W. Kirby, from Guard to Towing Locomotive Operator.

Upton W. Naron, from Substitute Window Clerk, Postal Division, to Towing Locomotive Operator.

Cyril A. David, from Painter to Leader Painter.

Juan A. Allen, from Toolroom Attendant to Clerk.

Benjamin Jemmontt, from School Bus Driver, Motor Transportation Division, to Timekeeper.

Rodolfo Ayarza, Gregorio Piterson, from Line Handler to Helper Lock Operator.

Roberto McDonald, Virgilio Vega, from Deckhand to Line Handler.

Jesus Becker, Leonard J. Blychanton, from Utility Worker, Supply Division, to Line Handler.

José D. Romero, from Laborer Cleaner, Community Services Division, to Line Handler.

Marvin K. Davis, from Packager, Supply Division, to Line Handler.

Industrial Division

Anastasio Sogandares, from Planner and Estimator to Supervisory Planner and Estimator.

Dennis A. Gilbert, from Purchasing Agent to Planner and Estimator.

Ralph E. Leathers, from Maintenance Machinist to Inspector (Elevators and Cranes).

OFFICE OF THE COMPTROLLER

Duane M. Perkins, from Supervisory EAM Project Planner, Payroll and Machine Accounting Branch, to Digital Computer Systems Analyst, Accounting Policies and Procedures Staff.

Robert W. Childers, from EAM Project Planner to Supervisory EAM Project Planner, Payroll and Machine Accounting Branch.

Robert K. Hanna, from Accounting Technician to Accountant, Accounting Division.

SUPPLY AND COMMUNITY SERVICE BUREAU

James O. DesLondes, from Administrative Services Officer, Office of Director, to General Supply Officer (Superintendent, Storehouse Branch), Supply Division Storehouse Branch.

Earl W. Sears, from Administrative Services Assistant, Community Services Division, Office of the Chief, to Administrative Services Officer, Office of the Director.

Supply Division

Joseph B. Burgoon, from Lead Foreman (Dry Cleaning), to Laundry and Dry Cleaning Plant Superintendent.

Patna L. Brown, from Retail Store Supervisor to Assistant Commissary Store Manager.

Seabert Haynes, from Sales Section Head to Retail Store Supervisor.

Bobby J. Stokes, from Guard, Locks Division, to Service Center Supervisor.

George Taylor, from Leader Heavy Laborer to Leader Scrap Materials Sorter.

William A. Holder, from Warehouseman to Clerk.

Erskine D. Clinton, from Counter Attendant to Truck Driver.

Allan R. Ellis, from Utility Worker to Sales Clerk.

Cyntia A. Ellis, from Utility Worker to Counter Attendant.

Clarence A. Tomlinson, from Laborer Cleaner to Warehouseman.

Alfredo A. Gale, from Heavy Laborer to Warehouseman.

Eduardo Osborne, from Laborer Cleaner and Special Waiter to General Helper and Special Waiter.

Terrell C. Deakins, from Theater Usher to Theater Doorman.

Sylvia G. Best, from Car Hop to Counter Attendant.

Ernesto A. Harrison, from Pinsetter to Utility Worker.

Joseph Higgs, from Package Boy to Utility Worker.

Arthur M. Butcher, from Package Boy to Laborer Cleaner.

Frederick D. Simmons, from Bus Boy to Utility Worker.

Alfred Davidson, from Laborer Cleaner to Utility Worker.

Angel Molinar, from Laborer, Dredging Division, to Dairy Worker.

Manuel Caballeros, from Laborer, Maintenance Division, to Heavy Laborer.

Community Services Division

Francisco Villarreal, from Laborer to Gardener.

Silvio Gallardo, from Laborer to Grounds Maintenance Equipment Operator.

Terencio Forbes, Laborer, from Dredging Division.

TRANSPORTATION AND TERMINALS BUREAU

Herman V. Cameron, from Truck Driver to School Bus Driver.

Terminals Division

Charles T. Francis, from Winchman to Leader Ship Stevedore.

Tolo Singh, from Helper Electrician to Stevedore.

Daniel A. Viafora, from Cargo Marker to File Clerk.

Railroad Division

William R. Graham, from Supervisory Administrative Services Assistant to Administrative Services Officer.

Enrique Riviere, from High Lift Truck Operator, to Freight Clerk.

OTHER PROMOTIONS which did not involve changes of title follow:

Earl F. Unruh, Director of Posts, Postal Division.

Edna T. Karpinski, Director of Nursing, Coco Solo Hospital.

Raymon A. Nesbitt, Admeasurer, Navigation Division.

L. Sybil Riesch, Nurse Supervisor (General Medical and Surgical Hospital), Gorgas Hospital.

Merlin B. Yocum, Supervisory Cargo Checking Officer, Terminals Division.

Paul F. Dooley, Marine Traffic Controller, Navigation Division.

Betty R. Olsen, Time, Leave, and Payroll Clerk, Accounting Division.

Joan R. Cartotto, Clerk-Stenographer, Office of the Director, Engineering and Construction Bureau.

Virginia C. McCue, Library Assistant, Canal Zone Library.

Ruthwin Samuels, Retail Store Supervisor, Supply Division.

Sidney Brandford, Clerk, Navigation Division.

Isidro Cruz, Jorge Hernández, Benito Lucero, José D. Pérez, Gregorio Ruiz, Facundo Villarreal, Surveying Aid, Engineering Division.

Eric C. Henry, Alberto Robinson, Victor E. Waite, Utility Worker, Supply Division.

Hour-per-Ship Saved

IN ANOTHER Canal improvement, all hands working together have been able to cut the average time a transiting ship spends in Canal Zone waters by a full hour. It's 15.5 hours now versus 16.5 hours last year. One hour saved will not make a voyage, but they all add up to better service for world shipping.

It also represents a possible saving of $50 to $100 an hour in vessel operating costs. With more than 1,000 transits being made by ocean-going vessels annually, an estimated total savings of $1 million by Canal users is possible, assuming an average vessel operating cost of $100 per hour.

Lock Walls Pared Down

A TICKLISH nocturnal job done by Canal divers along the concrete approach walls at Pedro Miguel Locks has been completed as part of the long-range plan to improve the waterway's capability of handling larger ships. The broad-at-the-bottom slopes, or "Batters," of the locks walls have been cut back along their entire 75 feet. The batters previously interfered with deep-draft ships.

RETIREMENTS

RETIREMENT certificates were presented at the end of August to the employees listed below, with their positions at time of retirement and years of Canal service:

James F. Burgoon, Laundry and Dry Cleaning Plant Superintendent, Supply Division; 24 years, 4 months, 15 days.

James H. Burns, Chief Engineer, Towboat or Ferry, Navigation Division; 21 years, 4 months, 21 days.

Antonio Cañizales, Leader Heavy Laborer, Navigation Division; 32 years, 5 months, 23 days.

Percy Cobham, Leader Dock Stevedore, Terminals Division; 47 years, 2 months, 22 days.

Allan Daniels, Shipment Clerk, Railroad Division; 37 years, 8 months, 15 days.

Mrs. Frances F. Fears, Elementary and Secondary School Teacher, Division of Schools; 11 years, 10 months, 21 days.

Walter N. Grant, Deckhand, Supply Division; 41 years, 3 months, 3 days.

Miss Dorothy M. Hall, Secretary Stenographer, Dredging Division; 28 years, 4 months.

William D. Hardie, Supervisory Management Technician, Administrative Branch; 32 years, 9 months, 12 days.

Joseph P. Hawthorne, Towing Locomotive Operator, Locks Division; 28 years, 6 months, 28 days.

Mesias P. Lewis, Laborer Cleaner, Motor Transporation Division; 21 years, 2 months, 11 days.

Watkin H. Lindsay, Bookbinder, Printing Plant, Administrative Branch; 39 years, 1 month, 11 days.

Harry J. Linker, Shift Engineer, Electrical Division; 22 years, 1 month, 20 days.

Roberto Martínez, Utility Worker, Supply Division; 19 years, 1 month, 26 days.

Francisco Martínez R., Heavy Laborer, Community Services Division; 20 years, 18 days.

William B. Newball, Stevedore, Terminals Division; 4 years, 4 months, 7 days.

Mrs. Nye C. Norris, Personnel Clerk, Employee and Placement Branch; 18 years, 10 monhs.

Ferdinand L. Ottey, Chauffeur, Motor Transportation Division; 47 years, 6 months.

Juan Padilla, Laborer, Community Service Division; 13 years, 10 months, 1 day.

Hubert S. Robinson, Stockman, Supply Division; 35 years, 3 months, 25 days.

Frederick C. Rose, Chief Engineer, Towboat or Ferry, Navigation Division; 32 years, 3 months, 13 days.

Jagat Singh, Stevedore, Terminals Division; 31 years, 2 months, 20 days.

Eduardo A. Soto, Clerk, Railroad Division; 25 years, 5 months, 17 days.

Beresford S. Tompson, Sales Clerk, Supply Division; 33 years, 9 months, 13 days.

Walter Wagner, Chief Power System Dispatcher, Electrical Division; 25 years, 6 months, 22 days.

James E. Walker, Foreman, Transmission Lines, Electrical Division; 21 years, 10 months, 12 days.

SHIPPING

Trailer Ship Service

A NEW TYPE of cargo ship, carrying cargo loaded in 35-foot trailers, passed through the Canal during September on its maiden voyage inaugurating a new intercoastal trailer service. The ship was the U.S. flag SS *Elizabethport* which was en route from New Jersey to Los Angeles and San Francisco. The voyage was to take 14 days. The *Elizabethport* will make regular trips through the Panama Canal on her intercoastal run and soon will be joined by a sistership, the *San Juan*.

Her owners, Sea-Land Service, Inc., have announced that by the end of this year there will be four jumbo trailerships on this service. The trailers carrying the cargo are loaded and unloaded by huge gantry cranes which are part of each vessel's superstructure. A trailer can be unloaded and replaced by a new one in an average of 4 minutes. Andrews & Co. act as agents for the line at the Canal.

TRANSITS BY OCEAN-GOING VESSELS IN AUGUST

	1961	*1962*
Commercial	934	950
U.S. Government	25	16
Free	6	6
Total	965	972
TOLLS *		
Commercial	$4,751,586	$4,929,238
U.S. Government	117,107	79,713
Total	$4,868,693	$5,008,951
CARGO**		
Commercial	5,664,080	5,168,760
U.S. Government	159,618	91,809
Free	21,756	47,547
Total	5,845,454	5,308,116

*Includes tolls on all vessels, ocean-going and small.
**Cargo figures are in long tons

Safety Award

THE SHIP Safety Achievement Citation of Merit, awarded jointly by the Marine Section of the American National Safety Council and the American Merchant Marine Institute, was presented to the States Marine Line cargo ship *Beaver State* recently. The award was in recognition of the part taken by the officers and members of the crew in the rescue of survivers of the ill-fated *Pacific Seafarer* January 15, 1961. The rescue was made at sea about 15 miles north of Cristobal under difficult weather conditions. The *Beaver State* is a regular customer of the Panama Canal.

New Maersk Liner

THE LATEST addition to the blue-hulled Maersk fleet made its maiden voyage through the Canal recently. It was the MS *Thomas Maersk*, built in Denmark for the New York to U.S. west coast and Far East trade. The modern air-conditioned cargo liner has been built to cater to all types of special cargo and is equipped with such things as strong rooms, silk rooms, reefer chambers, and deep tanks for storage of vegetable oil, liquid latex, and molasses.

C. B. Fenton & Co., agents for the Maersk Line here, announced that the ship will join the Line's list of regular Canal customers and has accommodations for 12 passengers.

Dredging Assistance

THE PANAMA CANAL'S Dredging Division will get an assist during the coming dry season from the sea-going hopper dredge *Harding*, which will be sent to the Isthmus in January by the U.S. Army Corps of Engineers.

The dredge will work in Gaillard Cut for approximately 3 months to assist Dredging Division forces in the clearing of material which was part of the cut-widening work in that area.

Built by the Corps of Engineers in 1939, the *Harding* is named for former Canal Zone Governor Chester Harding, who followed Governor George W. Goethals as Governor and served here from 1917 to 1921. It is 308.2 feet in length, has a beam of 56 feet, and a capacity of 2,500 cubic yards.

Sea-going hopper dredge due in January.